



# **CAT5-1600HD**

**EXT-CAT5-1600HD**  
**User Manual**



**[www.gefen.com](http://www.gefen.com)**

## ASKING FOR ASSISTANCE

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### Notice

Gefen LLC reserves the right to make changes in the hardware, packaging and any accompanying documentation without prior written notice.

**CAT5-1600HD** is a trademark of Gefen LLC

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# INTRODUCTION

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Congratulations on your purchase of the CAT5-1600HD. Your complete satisfaction is very important to us.

## **Gefen**

Gefen is a unique product line catering to the growing needs for innovative home theater solutions. We specialize in total integration for your home theater, while also focusing on going above and beyond customer expectations to ensure you get the most from your hardware. We invite you to explore our distinct product line and hope you find your solutions. Don't see what you are looking for here? Please call us so we can better assist you with your particular needs.

## **The Gefen CAT5-1600HD**

Extend your DVI and USB 2.0 peripherals with the Gefen CAT5-1600HD up to 200 feet away from the computer using two CAT-6a cables. The unit includes a built-in 4-port USB 2.0 hub located on the Receiver unit and gives complete computer access control up to 150 feet away.

## **How It Works**

Connect the DVI and USB computer ports to the Sender unit. Connect the remote display and computer peripherals to the Receiver unit. Two CAT-5e cables (for the DVI and for the USB 2.0) extensions connect the Sender and the Receiver units together. Power up the units, and a crisp picture will appear on the display.

## OPERATION NOTES

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### READ THESE NOTES BEFORE INSTALLING OR OPERATING THE CAT5-1600HD

- CAT-6a cables can be used up to 200 feet (60 meters).
- CAT-5e cables can be used up to 150 feet (45 meters).
- Shielded (STP) CAT-5e/CAT-6a is recommended. However, unshielded (UTP) CAT-5e/CAT-6a is acceptable.

**NOTE:** Shielded cable has an advantage by providing immunity to Electromagnetic Interference (EMI), cell phones and A/C motors.

- The CAT5-1600HD only supports DVI-D signals. Analog DVI content is not supported.

# FEATURES

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## Features

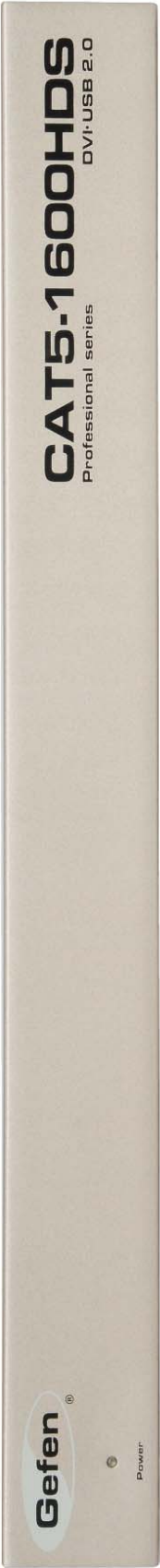
- Extend any DVI source at 1920x1200 up to 200 feet (60 meters) using CAT-6a cable.
- Extends USB 2.0 compliant devices up to 300 feet
- DVI is transmitted digitally for zero signal loss over CAT-5 cable
- Supports video resolutions up to 1080p and 1920x1200.
- HDCP compliant for viewing of copy-protected video content (e.g. Blu-ray)
- Supports the DDWG standard for DVI compliant monitors
- Includes rack ears

## Package Includes

- (1) CAT5-1600HD Sender Unit
- (1) CAT5-1600HD Receiver Unit
- (1) 6 ft. DVI cable (M-M)
- (1) 6 ft. USB cable (A-B)
- (2) 5V DC Locking Power Supplies
- (1) Set of Rack Ears
- (1) User Manual

SENDER PANEL LAYOUT

Front Panel



1

Back Panel



2 3 4

5 6 7

## SENDER PANEL DESCRIPTIONS

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**1    *Power LED***

When this LED is lit, power is correctly supplied to the unit.

**2    *USB Input***

Supplies USB connection from the host computer to the Sender. Connect a USB cable from an available USB port on the computer to this jack.

**3    *Host Connected LED***

When this LED is lit, this indicates that the host computer and the Sender unit are connected together properly.

**4    *CAT-5 USB Link Input***

Connects to the Receiver unit via a length of CAT-5e or CAT-6a cabling. Used for transmission of the USB signal from Sender to Receiver.

**5    *CAT-6 Video Link Input***

Connects to the Receiver unit via a length of CAT-5e or CAT-6a cabling. Used for transmission of the DVI video signal from Sender to Receiver.

**6    *DVI Input***

Connects the computer's DVI video interface output to the Sender unit.

**7    *5V DC Locking Power Connector***

Connect the supplied 5V DC locking power supply here.



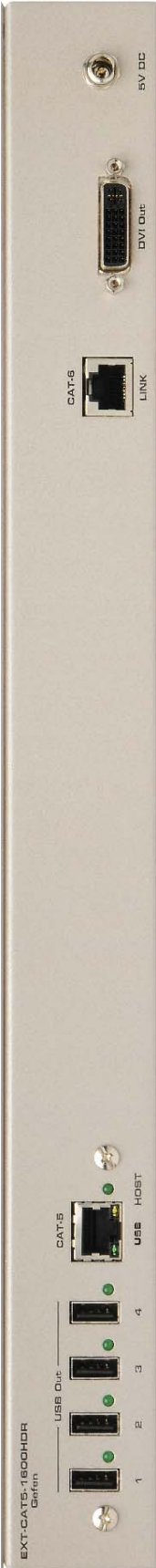
RECEIVER PANEL LAYOUT

Front Panel



- 1
- 2

Back Panel



- 3
- 4
- 5
- 6
- 7
- 8

## RECEIVER PANEL DESCRIPTIONS

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### **1 Power LED**

When this LED is lit, power is correctly supplied to the unit.

### **2 EQ Trim Pot**

The EQ trim pot is used to equalize the signal to compensate for the extension distance and the quality/skew variances that are found in different CAT-5e / CAT-6a cabling brands.

### **3 USB Outputs**

Connect the keyboard, mouse, printer and any USB-compatible accessories (such as an external hard disk drive) to these ports.

### **4 CAT-5 USB Link Input**

Connects to the Receiver unit via a length of CAT-5e or CAT-6a cabling. Used for transmission of the USB signal from Sender to Receiver.

### **5 Host Link LED**

When this LED is lit, this indicates that the host computer and the Sender unit are connected together properly.

### **6 CAT-6 Video Link Input**

Connects to the Sender unit via a length of CAT-5e or CAT-6a cabling. Used for transmission of the DVI video signal from Sender to Receiver.

### **7 DVI Output**

Connect the remote DVI-compliant display device to this port on its input cable.

### **8 5V DC Locking Power Connector**

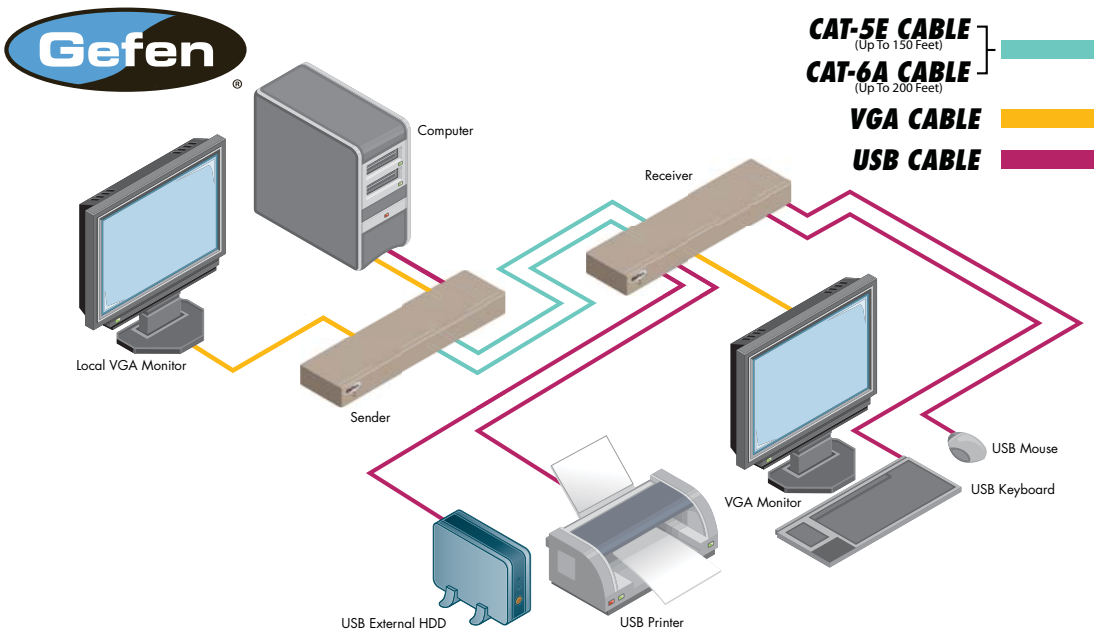
Connect the supplied 5V DC locking power supply here.

# CONNECTING AND OPERATING THE CAT5-1600HD

## How to Connect the CAT5-1600HD

1. Connect the Sender unit to the computer via the included DVI and USB cables.
2. At the remote location, connect the display, mouse, keyboard, printer and any other USB accessory to the Receiver unit (up to 4 USB devices may be connected at one time to the Receiver unit).
3. Connect the Sender and Receiver units together with up to 200 feet of CAT-6a or up to 150 feet using CAT-5e cable.
4. Connect the included 5V DC external power supplies to both the Sender and Receiver units. Gently screw in the threaded locking power connectors, being careful not to overly tighten them.
5. The remote computer can now be controlled from the Receiver unit.

## Wiring Diagram for the CAT5-1600HD



**EXT-CAT5-1600HD**

## CONNECTING AND OPERATING THE CAT5-1600HD

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### Adjusting the Signal Quality

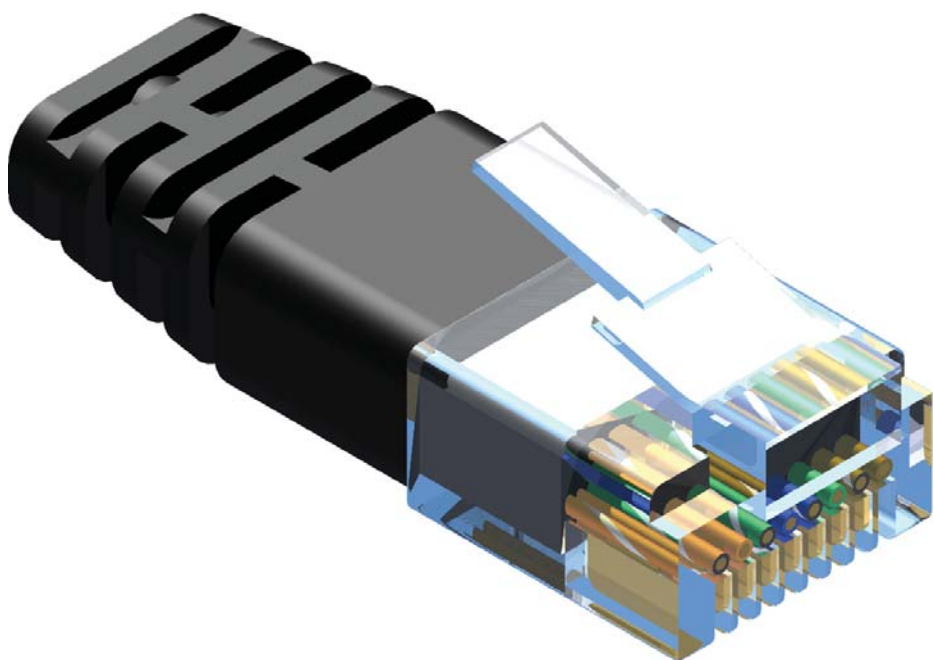
The CAT5-1600HD has an EQ trim pot on the Receiver Unit to compensate for the extension distance and cable skew found in different CAT-5e / CAT-6a cabling brands. If there is no output video or if output video contains video artifacts and/or video noise such as snow, use the steps below to adjust the EQ trim pot.

1. Insert a small flat-headed tool into the EQ trim pot on the front panel of the Receiver Unit.
2. The trim pot has 8 set positions. Turn the trim pot clockwise until it clicks into the next position. Continue adjusting the trim pot until the issue is resolved.
3. Carefully remove the adjustment tool.



EQ Trim Pot

# NETWORK CABLE WIRING DIAGRAM



Gefen recommends the TIA/EIA-568-B wiring option. Please adhere to the table below when field-terminating the CAT-5e / CAT-6a cable for use with Gefen products.

Pin	Color
1	Orange / White
2	Orange
3	Green / White
4	Blue
5	Blue / White
6	Green
7	Brown / White
8	Brown

CAT-5e / CAT-6a cabling comes in stranded and solid core types. Gefen recommends using solid core cabling.

It is recommended to use one continuous run from one end to the other. Connecting through a patch is not recommended.

## RACK MOUNT INSTALLATION

Rack mount ears are provided for installation of this unit into a 1U rack mount space.

1. Locate the side screws on the unit.
2. Remove the front 2 screws that are located closest to the front of the unit.
3. Using the removed screws, screw the rack mounting bracket into the unit.
4. Repeat the procedure on the opposite side of the unit.



## SPECIFICATIONS

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Maximum Pixel Clock.....	165 MHz
Single Link Range.....	1080P, 1920 x 1200
Input Video Signal.....	1.2V p-p
Input DDC Signal.....	5V p-p (TTL)
DVI Connector.....	DVI-I (29 pin) female (DVI-D digital signal only)
USB Input (Sender).....	USB type “B” connector
USB Output (Receiver).....	four USB type “A” connectors
Link Connectors (2).....	RJ-45 Shielded
Power Supply.....	5V DC
Power Consumption.....	20W (max.) per unit
Dimensions.....	17” W x 1.75” H x 4.375” D
Shipping Weight.....	7 lbs.

## WARRANTY

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Gefen warrants the equipment it manufactures to be free from defects in material and workmanship.

If equipment fails because of such defects and Gefen is notified within two (2) years from the date of shipment, Gefen will, at its option, repair or replace the equipment, provided that the equipment has not been subjected to mechanical, electrical, or other abuse or modifications. Equipment that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for ninety (90) days from the day of reshipment to the Buyer.

This warranty is in lieu of all other warranties expressed or implied, including without limitation, any implied warranty or merchantability or fitness for any particular purpose, all of which are expressly disclaimed.

1. Proof of sale may be required in order to claim warranty.
2. Customers outside the US are responsible for shipping charges to and from Gefen.
3. Copper cables are limited to a 30 day warranty and cables must be in their original condition.

The information in this manual has been carefully checked and is believed to be accurate. However, Gefen assumes no responsibility for any inaccuracies that may be contained in this manual. In no event will Gefen be liable for direct, indirect, special, incidental, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. The technical information contained herein regarding the features and specifications is subject to change without notice.

For the latest warranty coverage information, refer to the Warranty and Return Policy under the Support section of the Gefen Web site at [www.gefen.com](http://www.gefen.com).

## PRODUCT REGISTRATION

**Please register your product online by visiting the Register Product page under the Support section of the Gefen Web site.**





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This product uses UL listed power supplies.